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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 08/926,277 | 09/05/1997 | PAUL F VACHRIS | | 6715 |

7590

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EXAMINER

ROSENBERGER, RICHARD A

ART UNIT

PAPER NUMBER

2877

DATE MAILED: 03/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

08/926,277

Applicant(s)

VACHRIS ET AL.

Examiner

Richard A Rosenberg

Art Unit

2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12/12/2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 64-81 and 97-111 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 64-81 and 97-111 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. Claims 97, 100, 104, 106 and 109 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

These claims set forth that "said resolution element is a finger". This is not in agreement with the specification. The specification mentions a resolution element (page 14, lines 18-23) as being the resolution of the images, that is, basically the size of a pixel of the image. Thus the claims that the resolution element is a finger is not in agreement with the specification.

Perhaps what was intended was to claim that the relief object, rather than the resolution element, is a finger it is so taken below.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 64-66, 71-81, and 97-111 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gaffney (WO 97/16834) in view of the discussion of prior art in the instant specification.

Gaffney shows a system which comprises an electroluminescent device (14, page 7, line 22) having an electrode (16) and a dielectric layer (page 7, lines 22-23:

"separated from two electrodes by thin layers of dielectric materials") disposed next to the electroluminescent device. There is a variable resistive layer adjacent the dielectric layer (abstract: "a material or structure whose resistivity varies as a function of pressure"). There is a flexible electrode substantially covering a surface of the variable resistive layer (page 9, lines 5: "A thin, flexible conducting sheet . . ."). The system is operated by an electrical current source having one lead coupled to the two electrodes (page 5, lines 5-7; page 7, lines 24-28).

Gaffney does not disclose that the variable resistance layer can be 'comprised of conductive particles dispersed through a non-conductive medium'. The instant specification indicates that such layers are known in the art (page 15, line 2). It would have been obvious to use this type of known variable resistive layers for the variable resistive layer of the device of Gaffney because it is a "material or structure whose resistivity varies as a function of pressure" as taught by the Gaffney reference. It is clear that the resolution of the image obtained by the device of the Gaffney reference would be limited by the size of the particles when such a known layer were used; thus the system to be useful must be designed such that the size of the particles are less than the resolution element, since the smallest effective resolution element possible is comparable to the size of the particles in the layers. Those in the art could choose such a layer as appropriate for the use at hand within the expected uses of the device. It is clear that, were a finger pressed against the device of Gaffney, an image of some sort would be produced and detected.

The instant specification notes that the various claimed electroluminescent layers claimed (various organic structures in claims 65, 72-77, and 80; inorganic in claim 66, being comprised of a light emitting layer containing light emitting particles in claims 71, 78, and 79) are per se known in the art; also Gaffney discloses the use of electroluminescent material comprised of "a dielectric layer with embedded phosphorescent particles" (page 8, lines 26-27), and notes the use of indium tin oxide (instant claim 76) is a known and usable transparent electrode (page 6, line 20). The use of any of these for the electroluminescent structures of the light structure of Gaffney would have been obvious because they are known electroluminescent materials which emit light when exposed to an electric field and for which the intensity depends on the amount of current.

4. Claims 67-70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gaffney (WO 97/16834) in view of the discussion of prior art in the instant specification as applied to claim 64 above, and further in view of Iwata et al (the English Abstract and Drawing figures of JP 402126381A).

Gaffney produces an image of the pressure distribution (abstract, "converts a pressure distribution into a visible image"), but does not disclose using an image detecting array to convert the image into a form usable by a computer or other electronic systems.

It is known in the art that the sort of visible image produced by a sensor of the general type disclosed by Gaffney can be detected by a CCD sensor. Iwata et al shows this; there is a light emitting body layer (15) which emits light which is directed onto a CCD detector (11). It would have been obvious to direct the light from the system of Gaffney into a CCD in the manner shown by Iwata because it is a known manner of converting the image from the light emitting body into an electrical form. While Iwata et al shows a lens (12), it would have been obvious to transfer the image to the CCD detector by direct contact when the sizes of the two are able to be made comparable.

5. The remarks filed 1 December 2003 argue that "Gaffney has designed a device to sense pressure and not to specifically create a detailed image that can be used for identification" and "Gaffney does not teach or suggest that the system can be used to generate an image for purposes of identification" (remarks, page 12). It is noted that Gaffney does form an image; the abstract of that reference begins "A pressure transducer *that converts a pressure distribution directly to a visible image*" [emphasis added]. The instant claims do not call form more than this.

The argument that the device forms "a detailed image that can be used for identification" is not by itself persuasive, but were there claims to reflect that the system could provide "a detailed image *of a fingerprint* that could be used for identification" then these claims would be allowable; Gaffney does not appear to

teach that this type of sensor could be used for “pressure distributions” of the precision or resolution of a fingerprint, or that the differences in pressure between the ridges and valleys of a fingerprint, particularly give the fact that fingertips are soft, would produce in such a device a useful and detectable image of the fingerprint.

The instant claims do not set this forth. The current claim language that there is some “resolution element” of undefined size is not sufficient, since the size of the claimed a resolution element could be quite large in comparison to the details of a fingerprint. Assuming that claims 97 et al above intended to claim that the “relief object” is a finger, than this, too, is not sufficient; within the scope of such a claim the detection of the mere presence of a finger, without the resolution needed for detection of the fingerprint needed for identification, would be meet the claim.

However, a claim that clearly related the device to the use in identification using fingerprints (and not merely the presence of a finger pressing on the device) would appear to be allowable over the art of record.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be

Art Unit: 2877

calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Papers related to this application may be submitted to Group 2800 by facsimile transmission. The faxing of such papers must conform to the notice published in the Official Gazette, 1096 OG 30 (15 November 1989). The fax number is (703) 872-9306

Any inquiry concerning this communication or earlier communications from the examiner should be directed to R. A. Rosenberger whose telephone number is (571) 272-2428.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0956.

R. A. Rosenberger
4 March 2004



Richard A. Rosenberger
Primary Examiner